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When the Going Gets Tough, the Tough Get Going: Social Identification and Individual Effort in Intergroup Competition

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Based on social identity theory, the authors predicted that in ongoing intergroup competition, people's strength of social identification will have a positive impact on their behavioral efforts on behalf of an ingroup when its current status is low, whereas this will not be the case when its current status is high. In a first experiment, male participants showed the expected pattern of behavior. Female participants, however, tended to display opposite reactions. As a possible explanation, it was argued that the experimental procedure may have inadvertently evoked a gender-based stereotype threat for female participants. In an attempt to obtain more consistent support for their hypothesis, the authors therefore replicated the experiment with modifications to avoid such a threat. These changes proved to be effective in the sense that this time the predicted interaction effect between ingroup identification and current group status was obtained for both male and female participants.

Groups often compete with other groups in society to obtain power, prestige, or wealth. Whether a group achieves its ultimate goals will largely depend on the sustained efforts of individual group members. Therefore, an important question is how people's willingness to work on behalf of their group is affected by victory and defeat in intergroup competition. That is, will group members work harder for the benefit of their group when it is doing well in competition or will they be more inclined to exert themselves when their group faces difficulties? In the present article, we will argue that social identification processes play a crucial role in determining people's motivational responses to their group's successes and failures in ongoing competition.

According to social identity theory (Tajfel & Turner, 1979), part of people's self-concept stems from the knowledge that they belong to certain groups, which is referred to as their social identity. Presumably, people strive for a positive social identity. That is, they want to be part of groups that are positively distinct from other groups. Group members will therefore be especially motivated to engage in strategies to maintain or achieve a satisfactory social identity when their group compares unfavorably to other groups (i.e., when their social identity is threatened). One course of action that people may take to enhance their social identity is to dissociate themselves from unsuccessful or low-status groups and try to gain membership in other, more attractive groups (cf. Tajfel & Turner, 1979). Accordingly, experimental research shows that, in general, people tend to distance themselves from their group when it compares unfavorably to other groups, whereas they identify more strongly with their group when confronted with a favorable intergroup comparison (e.g., Ellemers, Kortekaas, & Ouwerkerk, 1999; Ellemers, van Knippenberg, de Vries, & Wilke, 1988).

At first sight, these findings may lead us to the pessimistic conclusion that a group will tend to disintegrate

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whenever it suffers a defeat in intergroup competition, which will arguably have a negative impact on group performance. However, research also shows that when the relative position of one's group may change in the future (as is the case in ongoing intergroup competition), people do not readily dissociate themselves from an unsuccessful group (e.g., Ellemers, van Knippenberg, & Wilke, 1990). It is assumed that, instead, they will try to improve the position of their group vis-à-vis other groups. That is, presumably members of low-status groups will engage in so-called social competition to maintain or achieve a positive social identity. Indeed, in their original formulation of social identity theory, Tajfel and Turner (1979) proposed that a negative social identity (i.e., an unfavorable outcome of an intergroup comparison) "promotes subordinate-group competitiveness toward the dominant group to the degree that *subjective identification with the subordinate group is maintained* [italics added]" (p. 45). Thus, provided that people still identify strongly with their group, they are believed to be more inclined to expend effort to improve its position after an unfavorable intergroup comparison (i.e., failure) rather than a favorable intergroup comparison (i.e., success).

Unfortunately, to date, experimental research within the domain of social identity theory has not directly investigated the combined impact of current group status and ingroup identification on people's behavioral efforts to improve their group's position. Although several theorists have argued that in the area of intergroup relations behavioral dependent measures are of the utmost importance (e.g., Mackie & Smith, 1998), previous researchers have predominantly used the occurrence of ingroup favoritism in evaluative judgments or the allocation of points as indicators of the tendency of group members to engage in social competition (see Hinkle & Brown, 1990; Mullen, Brown, & Smith, 1992, for overviews). The results of these studies show that, contrary to the prediction that members of low-status groups should be more apt to engage in social competition, they do not show more ingroup favoritism in evaluative judgments or in the allocation of points than do members of high-status groups.

In fact, members of low-status groups often display outgroup favoritism (see Mullen et al., 1992). One possible reason for this is that members of low-status groups, as noted earlier, may choose to dissociate themselves from their group rather than to improve its position relative to other groups. However, if this is indeed the case, then one would expect to find a strong positive association between people's strength of identification with their group and displays of ingroup favoritism. Again, research findings are inconsistent. That is, research shows only modest positive correlations between ingroup identification and ingroup favoritism, and

some negative correlations are reported as well (see Hinkle & Brown, 1990).

In an attempt to account for these problematic findings, it has been suggested that even when people identify strongly with a low-status group, social reality may prevent them from claiming ingroup superiority on evaluative dimensions or favoring their group in outcome allocations (e.g., Ellemers, van Rijswijk, Roefs, & Simons, 1997). Consequently, people's group evaluations and outcome allocations may simply reflect social reality (i.e., current status differences) and have little bearing on identity enhancement processes (cf. Hinkle & Brown, 1990). Indeed, we argue that displays of ingroup favoritism do not allow group members to actually change the status quo on the comparison dimension in question. In this sense, ratings on evaluative dimensions and outcome allocations may be considered inappropriate measures of social competition.

Furthermore, both the general tendency to depict other ingroup members in a positive way and the inclination to allocate more points to ingroup than outgroup members are unlikely to be costly to the individual. It is relatively inconsequential to show these responses, so that the assessment of whether people engage in such forms of ingroup favoritism does not constitute a critical test of their preparedness to improve the position of their group (cf. Ouwkerk, Ellemers, & de Gilder, 1999). In the present research, we will therefore investigate the individual effort that group members are willing to exert to actually change the status quo. More specifically, we will study how, depending on the level of ingroup identification, the current relative standing of one's group on a performance dimension affects people's behavioral efforts to improve their group's position on that same performance dimension.

Some experimental evidence suggesting that identification processes may influence individual effort and motivation stems from research on individual productivity in groups and social loafing. Social loafing, defined as "a reduction of individual effort when working on a collective task (in which one's outputs are pooled with those of other group members) compared to when working either alone or coactively" (Williams, Karau, & Bourgeois, 1993, p. 131), has proved to be a robust phenomenon across a wide variety of tasks. At first sight, this suggests that working on collective tasks always coincides with motivation losses. However, the groups employed in research on social loafing are usually psychologically insignificant. They are random aggregations of individuals with neither a history nor a future, so that people have little reason to develop a sense of identification with these groups.

Research suggests that people are more willing to exert themselves when working in groups that are argu-

ably more important to their social identity. Results of a meta-analysis by Karau and Williams (1993) show that the tendency of people to loaf is reduced when working with close friends or teammates rather than strangers. Furthermore, in an experiment directly comparing different kind of groups, Jehn and Shaw (1997) found that friendship groups outperformed mere acquaintance groups. More important, they showed that this effect was mediated by people's affective commitment to the group (a construct that is similar to ingroup identification) (cf. Ellemers et al., 1999). That is, the differences in group performance were explained by the fact that members of friendship groups had a stronger affective commitment to their group than did members of mere acquaintance groups.

In addition, research shows that conditions that increase the salience of a group to a person's social identity (i.e., factors that make it easier for people to categorize or identify themselves as ingroup members) may increase individual productivity and eliminate social loafing in groups. James and Greenberg (1989) found that the individual performance of university students on an anagram task, which would be pooled with that of fellow students, was enhanced when they completed this task in the presence of their university's colors. In a similar vein, Worchel and colleagues (Worchel, Rothgerber, Day, Hart, & Butemeyer, 1998) showed that people's tendency to loaf when working collectively was eliminated if group members wore matching uniforms. In fact, when wearing matching uniforms, individual productivity in a collective setting was higher than when working alone. In other words, it seems that, provided that their social identity is salient, people working in a group may engage in social laboring (cf. Brown, 1988) rather than social loafing.

However, both James and Greenberg (1989) and Worchel et al. (1998) also found that enhancing the salience of a group by itself is insufficient to increase individual productivity or to enhance social laboring. That is, their results showed that making the ingroup salient only increased people's individual efforts when they were led to believe that their group's performance would be compared with that of another group. No such effect was obtained when the expectation of an intergroup comparison was lacking. James and Greenberg (1989) proposed that increased salience of (or stronger identification with) a positively valued group, without an attendant threat to the positive perception of that group (i.e., without the possibility of an unfavorable outcome of an intergroup comparison), enhances people's social identity, thereby removing the urge to strive for a more satisfactory social identity (also see James & Cropanzano, 1994). Although this argument is consistent with social identity theory, James and Greenberg (1989) as well as

Worchel et al. (1998) only indirectly manipulated a threat to people's social identity by conveying that the performance of one's group would or would not be compared to that of another group. A more critical test of their hypothesis would involve manipulating the extent to which people's social identity is actually threatened.

In the present research, we will therefore attempt to manipulate the extent to which one's social identity is threatened by providing people with actual information concerning the current standing of their group vis-à-vis other groups, which may be either unfavorable (low status) or favorable (high status). Furthermore, rather than manipulating the salience of one's group, we intend to directly assess people's strength of social identification with their group, thereby enabling us to test Tajfel and Turner's (1979) hypothesis that a negative social identity will promote behavioral efforts to improve the position of one's group to the extent that subjective identification with the ingroup is maintained.

STUDY 1

Method

PARTICIPANTS

Participants were 63 (29 men and 34 women) 1st-year psychology students from the University of Amsterdam who were randomly assigned to either the low-status or the high-status condition. They all received course credits for their participation.

PROCEDURE

For each session of the experiment, 8 to 10 participants were scheduled. After arriving, each participant was placed in front of a personal computer. Participants were separated from each other by screens.

Pretest. At the beginning of the experiment, participants were asked to practice a spatial choice reaction task with different stimulus-response mappings, consisting of 60 trials. Previous research had shown that motivational factors (e.g., goal-setting and performance feedback) influence the average reaction time on this task (Stoffels et al., 1990). Therefore, the average reaction time of participants served as a baseline for the individual effort they were willing to exert. Before starting, the experimenter gave verbal instructions concerning the task. At the start of each trial, four white squares were presented in a horizontal row on the computer screen. After 1 second, the reaction stimulus appeared, consisting of one of these squares turning black. The participants' task was to indicate the position of the target by pressing the key that corresponded with the target position as fast as possible.

Responses were made by pressing one of four keys of the computer keyboard in front of the participant.

These response keys were the “z,” “x,” “.” and “/” keys, labeled as 1, 2, 3, and 4, respectively. Participants were to place their fingers on the marked keys of the computer keyboard in a left to right order: left middle finger on Key 1, left index finger on Key 2, right index finger on Key 3, and right middle finger on Key 4. They had to work with two inconsistent rules. The second and third square corresponded with the keys marked 2 and 3, respectively. Thus, when one of the inside squares turned black, they had to make a compatible response. However, when one of the outside squares turned black, they had to make an incompatible or crossover response. That is, the leftmost and the rightmost square corresponded with the keys marked 4 and 1, respectively. Participants were told that the score on the test would be determined by both their reaction time and the number of mistakes they made. However, it was emphasized that speed was more important than accuracy (“Only when you make many mistakes will this seriously influence your score”). In addition, participants were asked to carefully read written instructions for the task. After reading these instructions, they were asked to click on a button on their computer screen to start the test.

Status manipulation. After completion of the reaction task, participants read the alleged purpose of the study on their computer screens. Supposedly, a report was released by the board of the University of Amsterdam. In this report it was stated that “one can safely assume that students of the different departments at the University of Amsterdam differ in their average intelligence.” Allegedly, this statement had sparked off some debate because there was no scientific evidence to support it. Therefore, the University of Amsterdam had recently started an investigation, the so-called Departmental Competition, in which the participants would take part. The alleged goal of this study was to determine whether students from nine different departments of the university (psychology, medical science, mathematics, physics, philosophy, economics, language studies, chemistry, and law) differed in their performance on several intelligence dimensions. Next, preliminary results of this study were presented. Based on their average performance on the intelligence dimensions, psychology students were supposedly ranked either second (high status) or eighth (low status).

Manipulation check. To make sure that the current status of the psychology students was correctly observed, participants were asked to indicate at which department they studied by clicking on one of nine numbers (1 to 9) on their computer screen that corresponded with the position held by their department on the overall ranking.

Ingroup identification. Subsequently, participants were asked to complete a questionnaire, which included five statements concerning their identification with psychology students (“I identify with other psychology students,” “I feel committed to other psychology students,” “I am similar to other psychology students,” “I feel as part of the family among psychology students,” and “I have more in common with psychology students than with students of other departments”). They were asked to respond to these statements on 6-point scales in terms of their own degree of agreement (1 = *total disagreement*, 6 = *total agreement*). Next, participants were told that they were randomly selected to be tested on one particular intelligence dimension, namely, “adaptability to inconsistent rules.” Their adaptability to inconsistent rules could supposedly be measured by the reaction task they had practiced at the beginning of the experiment. Participants were asked to complete this task again.

Posttest. Before starting the test for the second time, the status manipulation was repeated by showing the preliminary results of the Departmental Competition on the dimension “adaptability to inconsistent rules.” Consistent with their position on the overall ranking, psychology students held either second or eighth place. It was strongly emphasized that, for privacy concerns, individual scores would remain anonymous. Hence, participants could not receive any information concerning their personal performance. However, they were told that their performance would influence the position held by the psychology students on the ranking. The extent to which participants performed better on the reaction task (had a lower average reaction time) the second time compared to the first time served as measure for individual effort on behalf of the ingroup (i.e., the psychology students). After completion, participants were fully debriefed and asked not to discuss the experiment with fellow students.

Results

MANIPULATION CHECK

All participants in the low-status condition indicated that they studied at the department that occupied the eighth position in the ranking of the Departmental Competition, whereas all participants in the high-status condition indicated that they studied at the department that occupied the second position. Thus, all 63 participants observed the current status of the students of their department (the Department of Psychology) correctly.

INGROUP IDENTIFICATION

The internal consistency among the five items measuring ingroup identification was high (Cronbach's $\alpha = .86$, $M = 2.77$). The scores on the identification scale were subjected to a 2 (low status, high status) \times 2 (male,

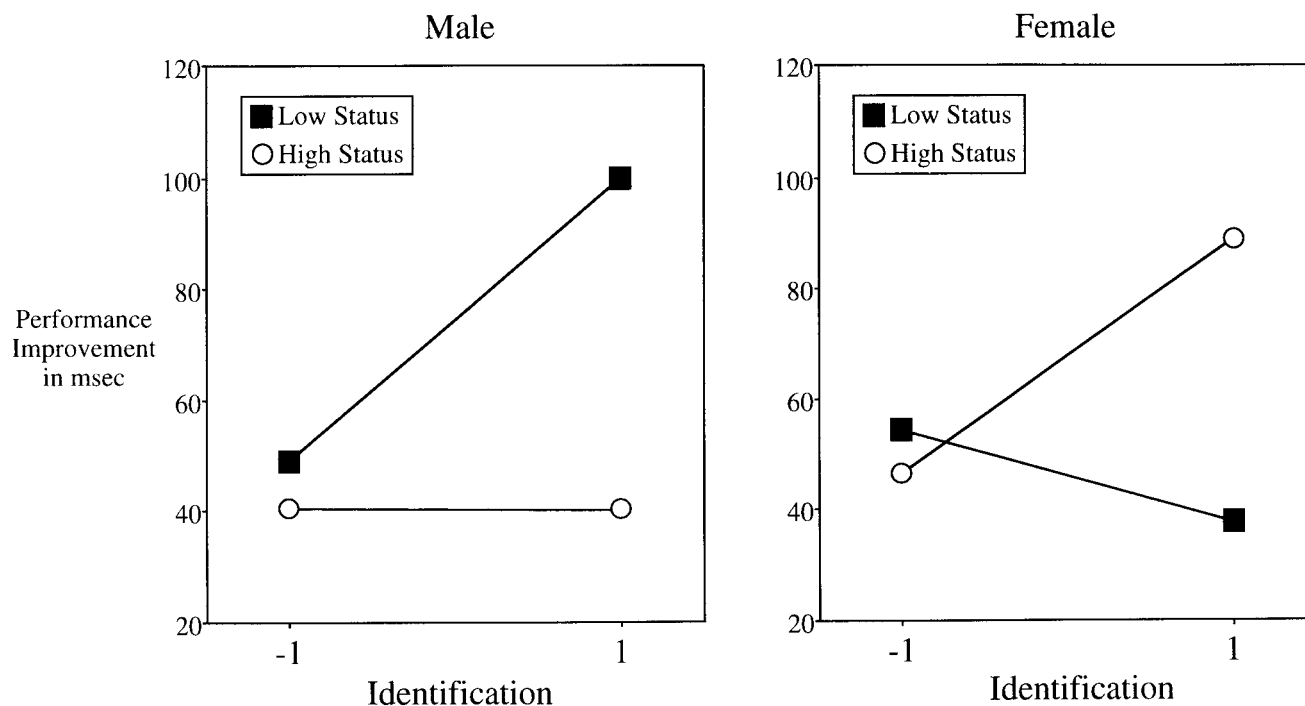


Figure 1 Performance improvement in milliseconds as a function of current status and ingroup identification (standard deviations from the mean) for male participants (left) and female participants (right) in Study 1.

female) analysis of variance. No significant effect was obtained of current status or gender, nor was the interaction between both factors significant, $F(1, 59) < 1$. Thus, the level of identification was independent of current status and gender.

PERFORMANCE IMPROVEMENT

The mean reaction time on the second task ($M = 634.27$ msec) was significantly lower compared to the mean reaction time on the first task ($M = 692.81$ msec), $t(1, 62) = 9.52, p < .0001$.¹ We predicted an Ingroup Identification \times Current Status interaction on individual effort on behalf of the ingroup. To test this hypothesis, a multiple regression analysis was conducted in which performance improvement (mean reaction time on first task – mean reaction time on second task) was simultaneously regressed on ingroup identification (standard deviations from the mean), current status (effect coded as $-1 = \text{high status}$, $1 = \text{low status}$), and gender (effect coded as $-1 = \text{female}$, $1 = \text{male}$), as well as on cross-product terms representing all two-way interactions and the three-way interaction between these predictor variables ($R^2 = .25$), $F(7, 55) = 2.57, p < .03$. The predicted interaction effect between ingroup identification and current status failed to reach significance ($\beta = -.02$), $F(1, 55) < 1$. However, we obtained a significant interaction effect between current status and gender ($\beta = .29$), $F(1, 55) =$

$5.96, p < .05$, which was qualified by a three-way interaction between ingroup identification, current status, and gender ($\beta = .28$), $F(1, 55) = 5.38, p < .05$.²

To examine the nature of this interaction, we calculated predicted values for participants who scored 1 standard deviation above or below the mean on each variable. As can be seen in Figure 1, this revealed that we did obtain the predicted interaction effect between ingroup identification and current status for male participants. That is, simple slope analyses (see Aiken & West, 1991) revealed that ingroup identification positively influenced performance improvement of male participants in the low-status condition ($\beta = .53$), $F(1, 55) = 6.97, p < .03$, whereas identification had no such effect in the high-status condition ($\beta = -.01$), $F(1, 55) < 1$. Unexpectedly, however, female participants tended to show opposite reactions. For them, ingroup identification had no effect in the low-status condition ($\beta = -.17$), $F(1, 55) < 1$, whereas in the high-status condition, ingroup identification positively, albeit not significantly, influenced performance improvement ($\beta = .43$), $F(1, 55) = 3.91, p < .06$.

Discussion

The results obtained for the male participants were consistent with our prediction. As expected, stronger

ingroup identification resulted in additional efforts on behalf of their group when its current relative standing was unfavorable (i.e., when their social identity was threatened), whereas no such effect was obtained in the high-status condition. Surprisingly, however, female participants tended to show an opposite pattern of results. That is, in contrast to male participants, female participants who identified strongly with their group tended to improve less in the low-status condition than in the high-status condition. A possible explanation for this unexpected finding is that, for female participants, the experimental procedure may have inadvertently evoked a so-called state of stereotype threat concerning gender differences in ability.

A stereotype threat is defined as the discomfort people feel when they are at risk of fulfilling a negative stereotype about their group's intellectual ability (e.g., Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995). This apprehension may result in test-anxiety and/or psychological disengagement of one's self-esteem from the performance domain in question (i.e., decreasing self-relevance), which in turn can spoil test performance, either by diverting attention or self-protective withdrawal of effort. The spatial choice reaction task that we used in our experiment, to allegedly assess people's adaptability to inconsistent rules, may have been perceived as a typically male task. That is, a task on which women are generally expected to perform worse than men. This expectation may have elicited a state of stereotype threat for female participants, which, in turn, may have had a negative impact on their performance.

Furthermore, the population of psychology students, in contrast to the population of students of most other faculties, is largely made up of female students (75%). Therefore, when confronted with the poor performance of other psychology students, female participants may have taken this as evidence of a generally lower ability of women to perform the task (i.e., stereotype confirmation). Consequently, in the low-status condition, the stereotype threat for female participants may have been strengthened, thereby hampering behavioral attempts to improve their group's current standing. In contrast, in the high-status condition, the superior performance of other psychology students may have led female participants to believe that women are actually more able than men to perform the task (i.e., stereotype disconfirmation), which may have reduced or eliminated the stereotype threat and its negative effects on performance improvement. Although this explanation is based on post hoc speculation only, we replicated the experiment with some important modifications to avoid a possible gender-based stereotype threat in an attempt to obtain more consistent support for our hypothesis.

STUDY 2

Method

PARTICIPANTS

Participants were 64 (23 men, 41 women) 1st-year psychology students from the University of Amsterdam who were randomly assigned to either the low-status or the high-status condition. They all received course credits for their participation.

PROCEDURE

With the exception of the changes described below, the procedure was identical to that of the first study. In contrast to Study 1, no verbal instructions were given. After arriving, each participant was placed in a separate cubicle equipped with a personal computer on which all instructions appeared. Furthermore, in contrast to Study 1, ingroup identification was assessed using 7-point scales rather than 6-point scales. More important, to avoid a stereotype threat, two changes were made. Research shows that stereotype threats concerning gender differences in abilities (and their negative effects on test performance) can be eliminated by simply describing a test as one on which there are no gender differences in performance (e.g., Spencer et al., 1999). Therefore, in the present study, before starting the reaction task the second time, participants were explicitly told that the test had never shown gender differences in performance. Furthermore, they were told that the preliminary ranking of the different departments (i.e., the status manipulation) was based on an equal proportion of male and female students for all study majors.

Finally, in contrast to Study 1, participants completed a postexperimental questionnaire. To assess a possible stereotype threat, participants were asked whether they thought that (a) male students would perform better on the task than female students, (b) female students would perform better than male students, or (c) that there would be no performance difference between male and female students. In addition, the self-relevance of the performance dimension (i.e., psychological disengagement) was measured by one item ("Being able to adapt to inconsistent rules is important to me").

Results

MANIPULATION CHECKS

As in Study 1, all participants observed the current status of their department correctly.

INGROUP IDENTIFICATION

The scores on the identification scale (Cronbach's $\alpha = .78$, $M = 3.77$) were subjected to a 2 (low status, high status) \times 2 (male, female) analysis of variance. No significant effect was obtained of current status or gender, nor

was the interaction between both factors significant, $F_s(1, 60) < 1$. Thus, as in Study 1, the level of ingroup identification was independent of current status and gender.

PERFORMANCE IMPROVEMENT

The mean reaction time on the second task ($M = 604.61$ msec) was significantly lower compared to the mean reaction time on the first task ($M = 680.28$ msec), $t(1, 63) = 13.79$, $p < .0001$.³ As in Study 1, performance improvement (mean reaction time on first task – mean reaction time on second task) was simultaneously regressed on ingroup identification (standard deviations from the mean), current status (effect coded as $-1 =$ high status, $1 =$ low status), and gender (effect coded as $-1 =$ female, $1 =$ male), as well as on cross-product terms representing all two-way interactions and the three-way interaction between these predictor variables ($R^2 = .30$), $F(7, 56) = 3.36$, $p < .005$. We obtained a significant main effect of ingroup identification ($\beta = .33$), $F(1, 56) = 6.59$, $p < .01$, which was qualified by a two-way interaction between ingroup identification and current status ($\beta = .40$), $F(1, 56) = 10.74$, $p < .001$.⁴

To examine the nature of this interaction, we calculated predicted values for participants who scored 1 standard deviation above or below the mean on each variable. As can be seen in Figure 2, this revealed that we obtained the predicted interaction effect between ingroup identification and current group status. That is, simple slope analyses revealed that in the low-status condition, ingroup identification positively influenced performance improvement ($\beta = .73$), $F(1, 56) = 12.90$, $p < .001$, whereas identification had no such effect in the high-status condition ($\beta = -.09$), $F(1, 56) < 1$. Of importance, in contrast to Study 1, this interaction effect was similar for male and female participants. That is, in the low-status condition, ingroup identification positively influenced performance improvement for men as well as women ($\beta_s = .66$ and $.81$, respectively), whereas in the high-status condition, identification had no effect on performance improvement for both men and women ($\beta_s = -.17$ and $-.01$, respectively). However, we did obtain a main effect of gender $\beta = -.28$, $F(1, 56) = 6.21$, $p < .05$, indicating that, regardless of identification and current group status, female participants showed more performance improvement ($M = 84.39$ msec) than male participants ($M = 60.13$ msec).

POSTEXPERIMENTAL QUESTIONNAIRE

Consistent with the additional information provided in the second study, most participants indicated that they thought there would be no performance differences between male and female students (78.12%), whereas a minority of participants indicated that there would be a gender difference in performance (male students better: 10.94%, female students better: 10.94%). Of

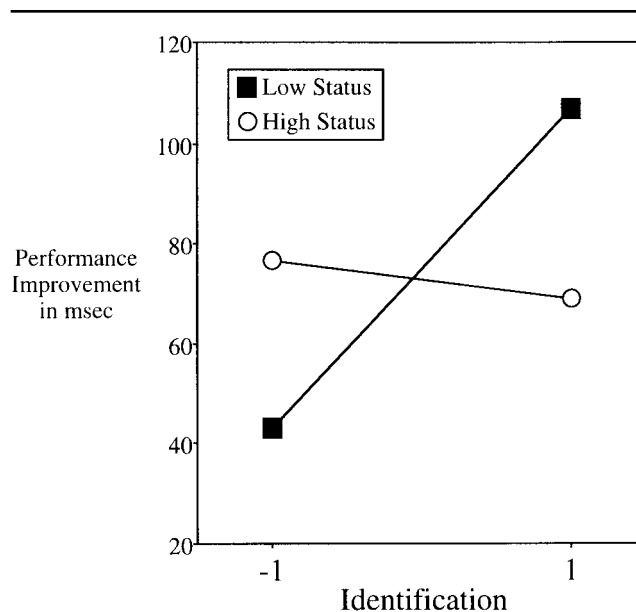


Figure 2 Performance improvement in milliseconds as a function of current status and ingroup identification (standard deviations from the mean) in Study 2.

importance, male and female participants did not differ in their expectation concerning gender differences in ability.

The measure tapping the self-relevance of the performance dimension ($M = 4.69$) was positively, albeit nonsignificantly, related to performance improvement ($r = .20$, $N = 64$, $p < .12$). However, a 2 (low status, high status) $\times 2$ (male, female) analysis of variance revealed no significant effects on self-relevance, $F_s(1, 60) < 1$. Thus, the results suggest that male and female participants also did not differ in the degree to which they disengaged themselves psychologically from the performance dimension in question.

Discussion

The modifications that were made in our second study to avoid a possible stereotype threat for female participants proved to be effective in the sense that the measures in the postexperimental questionnaire intended to assess a possible stereotype threat did not reveal any gender differences. More important, in contrast to Study 1, the predicted interaction effect between ingroup identification and current group status on individual effort was obtained for male as well as female participants. Thus, although we must exercise some caution given the lack of measures to directly assess whether female participants in the first and second study differed in the degree to which they experienced a gender-based stereotype threat, it is possible that the inconsistent results that were obtained for female participants in Study 1 may indeed

have been caused by such a threat. Some support for this explanation stems from the fact that female participants in Study 2 showed more performance improvement than male participants, whereas no such effect was obtained in Study 1. Indeed, whereas the average performance improvement for male participants in Study 2 ($M = 60.13$ msec) was similar to that in Study 1 ($M = 58.52$ msec), female participants overall showed more performance improvement in Study 2 ($M = 84.39$ msec) compared to Study 1 ($M = 58.56$ msec). Thus, the findings are consistent with research on gender-based stereotype threats (e.g., Spencer et al., 1999) to the extent that the overall performance improvement of women increased when the test was described as one that had never shown gender differences in performance.

GENERAL DISCUSSION

The results of the present research attest to the important role of social identification processes in determining people's motivational responses to their group's successes and failures in ongoing competition. As predicted, stronger identification enhanced individual effort on behalf of the ingroup when people's social identity was threatened, whereas no such effect was obtained when the current standing of one's group was favorable. The latter finding provides convincing support for James and Greenberg's (1989) argument that stronger identification with a positively valued group, without an attendant threat to the positive perception of that group, enhances people's social identity, thereby removing the urge to strive for a more satisfactory social identity. Indeed, our results show that only when the going gets tough, the tough (i.e., the strong identifiers) get going. To our knowledge, this finding provides the first experimental evidence for Tajfel and Turner's (1979) claim that a negative social identity should promote behavioral efforts to improve the position of one's group to the extent that subjective identification with the ingroup is maintained.

We have argued that highly identified group members performed better in the low-status condition than in the high-status condition because people's motivation to enhance their social identity is stronger when the current standing of one's group is unfavorable rather than favorable. An alternative explanation could be that group members in the high-status condition were more likely to perceive their inputs as dispensable or redundant compared to those in the low-status condition. That is, in the high-status condition, people may have felt that, even with minimal effort from their part, the ingroup would still be successful. Consequently, they may have been more inclined to engage in social loafing (cf. Harkins & Petty, 1982) or, rather, free riding (Kerr & Bruun, 1983).

From this perspective, however, it is difficult to explain why in the present research less-identified group members did not see their contribution as more dispensable (i.e., did not exert less effort) in the high-status condition than in the low-status condition. Furthermore, although free riding resulting from perceived dispensability of individual contributions is observed on disjunctive tasks (i.e., when the task requirement is for any one of the group members to reach a criterion and once this is accomplished all group members are considered to have succeeded), it is less likely to occur on additive tasks (Kerr & Bruun, 1983).

The present findings converge with, and extend, research by Williams and Karau (1991) on social compensation in dyads. They found that although people loafed when they worked together with another person who informed them that his or her level of ability was high, they exerted more effort working collectively than coactively when their coworker told them that his or her level of ability was low. That is, in the latter condition, people actually compensated for the expected poor performance of their coworker. Williams and Karau (1991) speculated that social identity concerns may constitute a possible motive for social compensation. They argued that people exert more effort when their coworker is expected to perform poorly because this elicits a realistic prospect that the group's performance will be inadequate.

Accordingly, the present research shows that in the low-status condition, psychology students compensated for the relatively poor performance of fellow students. Of importance, the fact that this was only the case for people who identified strongly with other psychology students lends support to the idea that a potential threat to people's social identity provides a motivational impetus for social compensation. Furthermore, although Williams and Karau (1991) argued that social compensation would only be observed when the group size is relatively small, our findings suggest that, provided that people identify strongly with their group, social compensation also may occur in larger groups.

Theories concerning the consequences of social comparison processes at the group level have traditionally focused on the negative consequences of unfavorable or so-called upward intergroup comparisons. Relative deprivation theorists have argued that unfavorable intergroup comparisons are likely to cause resentment, and even riots and violence (e.g., Gurr, 1970). Social identity theory (Tajfel & Turner, 1979) suggests that group members are motivated to avoid unfavorable comparison information because it is believed to result in an inadequate social identity and, by implication, a more negative self-concept. The results of the present research, however, show that the consequences of an upward inter-

group comparison are not necessarily negative. In fact, our findings suggest that, provided that people identify strongly with their group, an unfavorable intergroup comparison may have positive motivational consequences.

This raises the question of whether group members may actively seek upward comparison information to provide them with a source of inspiration for improvement. Indeed, similar notions have emerged in theory and research concerning social comparison activities at the individual level (i.e., interpersonal comparisons). That is, despite evidence that people are inclined to focus on favorable or so-called downward comparison information to serve self-enhancement motives (e.g., Wills, 1981), research has accumulated showing that people often make upward interpersonal comparisons for self-improvement motives (e.g., Helgeson & Mickelson, 1995). It should be noted, however, that focusing on an upward intergroup comparison to serve improvement motives does not conflict with the assumption that people strive for a positive social identity. That is, the eventual goal of improving the position of one's group is group enhancement (i.e., a more positive social identity). Likewise, at the individual level, it has been suggested that making (or not avoiding) an unfavorable interpersonal comparison may serve self-enhancement goals indirectly through self-improvement (e.g., Collins, 1996).

POSSIBLE LIMITATIONS AND FUTURE RESEARCH

The behavioral effects in our studies were obtained on a relatively simple task. Social loafing research shows that motivational effects are more difficult to detect on more complex tasks (e.g., Harkins & Petty, 1982; Karau & Williams, 1993), that is, on tasks with a less direct or even inverse relationship between effort and performance. The social loafing effects as observed in the present research are therefore also likely to be less prominent on more complex tasks. Notwithstanding this possible moderating role of task complexity, it should be noted that the task we used in our experiments was actually composed of simple trials (compatible responses) and more complex trials (incompatible or crossover responses). Additional analyses revealed that although participants responded faster on compatible than on incompatible trials, the interaction effect between ingroup identification and current group status on improvement of reaction time was similar for both types of trials.

We do not suggest that every confrontation with an unfavorable intergroup comparison in ongoing competition will increase the behavioral efforts of highly identified group members. For example, research shows that a superior performance of an outgroup will not result in increased efforts of ingroup members when the ingroup has had a relative advantage with respect to attributes or

circumstances that enhance performance (Ouwerkerk & Ellemers, 2000). Presumably, when one's group is outperformed despite having a relative advantage, people are more willing to acknowledge an inferior ability of their group (i.e., see its relative standing as legitimate) and therefore are more likely to refrain from behavioral attempts to change the status quo (cf. Tajfel & Turner, 1979). Arguably, a similar acceptance of a low group status may be observed following repeated failure in intergroup competition.

Furthermore, the extent to which a superior performance of an outgroup will pose a threat to people's social identity and, consequently, provide a source of motivation for highly identified group members may depend on the competitive nature of intergroup relations. Sherif's classic summer-camp studies (e.g., Sherif, Harvey, White, Hood, & Sherif, 1961) have demonstrated that when group members are placed in a competitive intergroup situation or are merely informed of the presence of a competing group, they immediately adopt a clear win-lose orientation. Such relational or comparative group orientations are characterized by spontaneous intergroup comparisons and a strong positive association between ingroup identification and intergroup differentiation (cf. Hinkle & Brown, 1990).

In our experiments, we deliberately created a competitive environment to ensure that group members would develop a comparative orientation (i.e., make intergroup comparisons). Hence, our findings mainly speak for competitive intergroup relations and groups that have adopted a comparative orientation. In less competitive situations, for example, when groups work together to accomplish a superordinate goal (cf. Sherif et al., 1961), group members may develop more autonomous orientations that are less concerned with maintaining a positive social identity by favorable intergroup comparisons (cf. Hinkle & Brown, 1990). Although in such situations group members may still make upward intergroup comparisons to provide them with a source of inspiration (indeed, they have little to lose by doing so), social identification processes are less likely to moderate their motivational responses to comparison information.

As predicted, our findings showed that stronger ingroup identification did not increase people's efforts on behalf of an ingroup when its current relative standing was favorable (i.e., when their social identity was not threatened). We do not claim, however, that there are no situations in which stronger identification will enhance the behavioral efforts of members of high-status groups. For example, when two groups are negatively interdependent of one another (i.e., when the gains of one group are losses for the other), status differences are highly insecure in the sense that any improvement of the low-status group will pose a direct challenge to the

high-status group (i.e., a potential threat to the positive social identity of its members). In such a situation, it is therefore likely that stronger ingroup identification will increase not only the individual efforts of members of the low-status group to improve their unfavorable standing but also the behavioral attempts of members of the high-status group to maintain their favorable position (i.e., to resist change).

The present research provides a first empirical demonstration of the crucial role of people's strength of social identification in determining their behavioral efforts in ongoing intergroup competition. Because intergroup competition is so pervasive in our society, it is important to gain further understanding of the influence of social identification processes on group member's motivational responses to their group's successes and failures in ongoing competition. Therefore, additional research in laboratory as well as applied settings is needed to investigate to what extent the present findings can be generalized to different tasks, groups, and situations.

NOTES

1. Participants also made significantly less mistakes on the second task ($M = 1.70$) than on the first task ($M = 3.02$), $t(1, 62) = 5.03$, $p < .0001$. However, no significant effects of the predictor variables were obtained on the change in the number of mistakes participants made.

2. We also conducted a regression analysis in which the performance on the second task was first regressed on the performance on the first task and then on the predictor variables (instead of using difference scores). This analysis yielded similar results. However, we chose to present the results pertaining to the difference scores because they are easier to interpret.

3. Participants also made significantly less mistakes on the second task ($M = 1.75$) than on the first task ($M = 2.50$), $t(1, 63) = 3.29$, $p < .002$. However, as in Study 1, no significant effects of the predictor variables were obtained on the change in the number of mistakes participants made.

4. As in Study 1, we also conducted a regression analysis in which the performance on the second task was first regressed on the performance on the first task and then on the predictor variables (instead of using difference scores). This analysis yielded similar results.

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